VI. Measurement Report

A. Context

As part of the strategic technology planning process for the County, Moss Adams observed that the County is still in the process of defining and implementing performance measurement tools for managing technology implementation and utilization. This performance measurement report has been prepared to establish a future framework that the County can consider and move towards for adopting best practices for approval, monitoring, and management of technology investments. The intent is to define the major elements of best practices, as well as provide sample conceptual forms that the County can build from for instituting future performance measurements tools. The performance measurement report is not intended to provide detailed procedures that project managers can use in a turnkey fashion for proposing projects or for providing monitoring information to the Office of Information Resource Management-Project Management Office.

B. Purpose

The purpose of performance measurement is to establish a standard framework for proposing, approving, implementing and maintaining technology investments, as well as to ensure that the forecasted benefits and value of the technology investments are realized. Once a comprehensive performance measurement framework is in place, the County will be able to use it as a tool for (a) defining the value and benefits expected from a technology project, (b) monitoring project implementations to ensure that issues are effectively managed to keep a project on track, (c) evaluating performance of project managers and programs in deploying technology, (d) assessing whether the County management and use of technology is aligned with the Strategic Technology Plan, and (e) computing total cost of ownership.

The critical concepts and steps are to:

(1) Define and analyze the business case, including the total cost of ownership, for individual projects before the projects are approved and funded, as well as for the Countywide technology budget.

(2) Measure forecasted outcomes against actual outcomes for projects during implementation, upon their completion, and later, when the project values are realized.

(3) Measure forecasted outcomes against actual outcomes for the Countywide budget based on the technology vision, goals, objectives, strategies, and established measurement criteria.

The development and measurement tools are for use with information technology investments involving new installations, major enhancements, and replacements of existing systems. For these purposes, information technology is defined as desktop computers, servers, networks and cabling, software, databases, applications, telephony, wireless communication, interfaces, peripherals (printers, scanners, etc.), and support and maintenance services. The definition of information technology does not include embedded systems such as computers that control engines, elevators, pumps, etc.

C. Measurement Principles

In order to institute a standard and manageable set of performance measurement tools, it will be important to first establish a foundation of guiding principles as presented below.

1. Keep the measurement tools simple to administer and cost effective to manage
2. Develop tools that are scalable for project, Program, and Countywide use
3. Synchronize the framework to the County's accounting and budgeting systems
4. Establish a definitive business case for each major technology project
5. Maintain consistency with County strategic goals and objectives
6. Incorporate alternatives and feasibility analyses into the decision-making process
7. Consider tangible quantitative and qualitative factors as part of cost/benefit analysis
8. Account for lifecycle costs and total cost of ownership
9. Incorporate risk assessment and management in the approval process
10. Link cash flow payments for a project to measurable performance outcomes
11. Measure outcomes for individual projects and the Countywide budget
12. Refine measurement and forecasting methods over time

These guidelines have been designed to be flexible so they can accommodate the unique needs of decentralized computing operations in departments, offices, and Programs throughout the County.

D. Components

Performance measurement should be structured so that funding is associated with clear and defined projects and performance outcomes can be measured throughout the lifecycle of the projects. Several sample forms have been included to illustrate the concepts the County should consider in improving its existing performance measurement Program. This section describes the project lifecycle and the measurement opportunities at various lifecycle stages, as well as introduces the concept of total cost of ownership.

1. Technology Lifecycle

The foundation of measurements should be built on a project lifecycle model as defined by best practices that can be applied by the County. There are four major phases to be considered within the technology lifecycle: (1) Project Planning, (2) Project Development, (3) Implementation, and (4) Production. Each step is structured to incrementally assemble the necessary information for making good decisions about whether to continue work on the project, and to ensure that the technology is deployed appropriately for the County. A brief description of each phase in the technology lifecycle is presented below.

Phase 1 - Project Planning. This phase should be where a project is conceived and subsequently documented in a proposal to define the project objectives and business value, as well as an initial analysis of costs, benefits, complexity, risks, and resource requirements. The extent of upfront documentation should vary depending on the size, complexity, and/or risk of the project. If the project has sufficient complexity, risk, or budget implications then the proposal will need to be prepared using most, if not all, the categories in the Project Proposal Form. Based on the merits of the proposal, the project could be

approved for preliminary funding to perform more detailed requirements, alternatives and feasibility analyses, in addition to computing the total cost of ownership.

Phase 2 - Project Development. More complicated projects will require significant financial and staffing resources, and will involve a higher level of risk for the County. Therefore, it will be important to strengthen and refine the business case for the project before acquisition, implementation, and maintenance funding is granted. To support the approval and funding of the implementation and production budgets for the project, the detail in the Project Proposal Form will need to be expanded to include additional research appropriate in the following areas:

- ***Requirements Analysis*** – The project requirements represent the foundation for the project business case. Technical staff will need to work with end users to clarify data, functional and reporting requirements, as well as system workflow needs. Where appropriate, intra and interagency participation will be required to ensure the full scope of the project is defined. In addition to supporting the business case, the requirements are also used as the basis for the alternatives/feasibility analyses of the various solution options.
- ***Alternatives Analysis*** – The viability of and appropriate approach for the project are to be determined by analyzing alternative solutions and considering whether the preferred approach is practical and realistic to pursue. This component of the business case should evaluate the strengths and weaknesses of each alternative, as well as the duration of the project, resource requirements, risk factors, and possible fatal flaws. Each alternative should then be placed side-by-side so that the tradeoffs of each approach can be compared. It should be remembered that "no change" can be a reasonable alternative that should be considered.
- ***Total Cost of Ownership*** – The final aspect of developing the business case will be to weigh the costs expected to be incurred against benefits potentially gained from the project. The costs are to include all capital and operating expenditures necessary to acquire, implement, and maintain the system. In contrast, benefits should reflect quantitative tangible and intangible gains expected from the project, as well as qualitative factors that might impact the "go/no go" decision. By defining the total cost of ownership, it will be possible to compute the break-even period and return on investment. The total cost of ownership for each alternative should be developed so that the cost impact of trade-offs in approach can be understood and evaluated.

Phase 3 - Implementation. Once funding for the project has been approved the County will need to establish phased funding release milestones as the project progresses through the acquisition, system preparation and implementation. By releasing funds based upon the performance of the project team and the achievement of project goals and measures, the County will be able to monitor the project implementation and apply resources only when the intended value is likely to be achieved. Status Reports are to be used as the primary tool to document the progress towards meeting the stated project objectives from the Project Proposal Form during implementation.

Before proceeding with the implementation, the County must refine systems requirements to support issuing of an RFI/RFP, review responses, conduct demonstrations with selected vendors, and complete due diligence with the apparent finalist (including reference checks, site visits, and hands-on testing). To ensure the proper foundation is in place for a successful implementation, the County should clarify the hardware requirements, scope potential modifications and customization, negotiate the hardware/software and service contracts, develop the implementation plan, organize the implementation team, and provide preliminary training for the implementation team.

County personnel should then work with the appropriate vendors and supplemental staff to deploy the new technology. At a minimum, the implementation should entail site preparation, system hardware and software installation, setup and configuration, data conversion, prototyping, workflow reengineering, documentation, report development, integration, training for technical and end users, preliminary and final acceptance testing, cutover, and go-live.

Once the implementation has been completed the County should assess the management of scope, resources, tasks, budget, and risk during the project. This should be accomplished with a Post Project Review. The form is to be used to report back on the results from the implementation and to state the reason and impact for any variances that were encountered.

Phase 4 - Production. The implemented technologies will need to be supported and administered while in use by the County. This includes maintaining the systems and underlying architecture, keeping releases and business procedures current, troubleshooting, training new users, and taking the necessary steps to ensure the vitality of the new system.

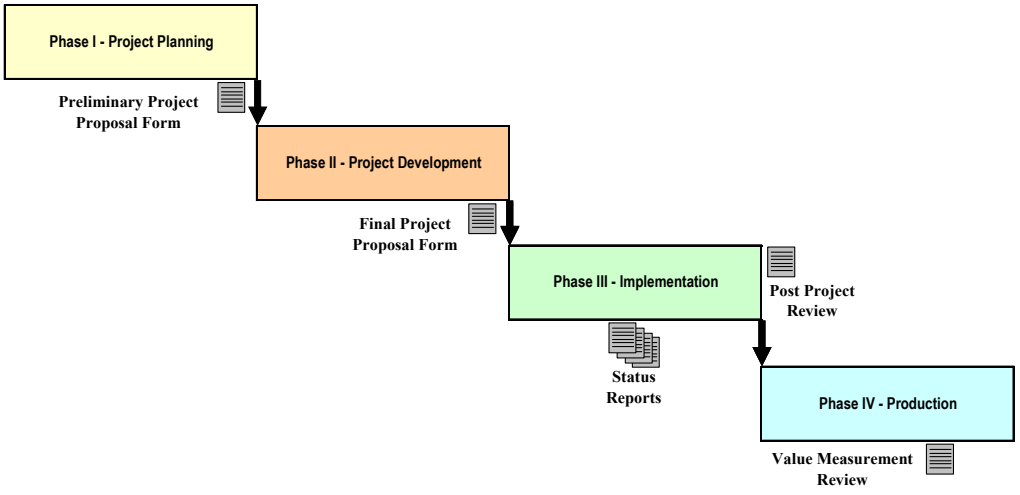
As part of the production phase, the County should assess whether the project was able to achieve the expected benefits and value that were anticipated for the project. The Value Measurement Review will provide a report on the quantitative and qualitative results realized over time by the completed project. This should include whether the value propositions were achieved, and whether the actual outcome measurements of the project met or exceeded expected outcomes established during the planning and development phases.

2. Measurement

It is recommended that the County measure outcomes at both the project level and in aggregate at the Program and Countywide levels. This approach will allow the County to assess the results of individual technology initiatives, as well as determine the total cost of ownership, associated risk, and return on investment of the County's complete technology portfolio.

Project Measures. Performance outcome measurement tools have been discussed in the previous section in the context of the project lifecycle. The measurements are to be initially defined using the Project Proposal Form, and refined in more detail and specificity moving from the project planning to the project development phase. The measurements should be assessed during project implementation using Status Reports, and at project completion through the Post Project Review. Once the implemented technology has been in production for a reasonable period of time, it will then be possible to examine the quantitative and qualitative results of the implementation against the expected outcomes. Each stage of measurement will allow the County to determine whether planned outcomes were achieved, and if not, to determine why the variance occurred and what the impact is on the overall success of the project. An overview of the measurement stages is presented below.

Exhibit 1
Project Measurement Stages



The specific details on each of the project measurement stages and corresponding tools shown above are defined in greater detail in the section entitled Project Measurement Tools.

Program and Countywide Measures. The County will combine the individual technology initiatives for each Program to determine the Program level technology budget and overall outcome performance. Similarly, the Programs should be aggregated to view technology management at a Countywide level. Such a holistic approach will enable the County to measure adherence of technology initiatives to the stated vision, goals, objectives, and standards contained in the Strategic Technology Plan. At the same time, it will allow analysis of the total cost of ownership for technology used within the County and a means to measure improvements in the future. For purposes of Program and Countywide measures, the County should measure improvements across the technology project portfolio by management of individual cost categories, achievement of specific benefits, and compliance with the Strategic Technology Plan.

3. Total Cost of Ownership

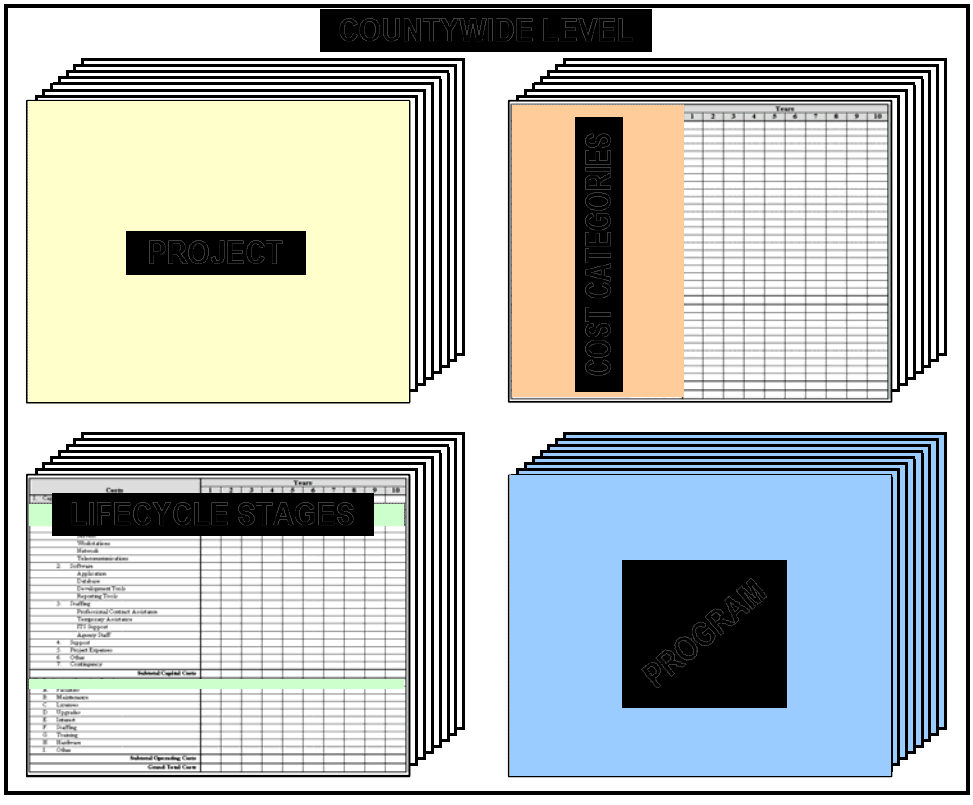
By establishing performance measurement tools, the County will finally be in a position to (1) define the entire Countywide technology investment portfolio, and to (2) analyze the value and benefits of individual projects as well as the overall portfolio. A key component to having visibility to the complete technology investment portfolio will be the ability to compute the total cost of ownership.

Total cost of ownership accounts for all the expenditures associated with each project throughout the entire project lifecycle, and allows analysis of the costs in multiple dimensions. Typical dimensions that the County will find of value for the effective and efficient management of the technology investment portfolio include viewing costs by:

- Individual technology project
- Cost categories (as defined in the Cost/Benefit Analysis section of the Project Proposal Form)
- Cost categories attributed to the four project lifecycle stages
- Projects as summarized at the Program level
- Aggregate of all projects at the Countywide level

The following diagram depicts the various dimensions that comprise total cost of ownership for the technology investment portfolio.

Exhibit 2
Total Cost of Ownership



The Project Proposal Form will allow the County to establish expectations for the cost categories that contribute to the total cost of ownership. The information to compile the total cost of ownership is contained in the Cost/Benefit Analysis section of the Project Proposal Form. By collecting this information in the planning stages of a project, the County will be able to determine how the project will impact the technology investment portfolio as well as the potential for risk and forecasted return on investment.

As part of the Project Proposal Form, the Alternatives Analysis section will permit the County to evaluate how different alternative solutions for a given project will impact the total cost of ownership. Therefore, the County will be able to make an informed decision about how to best proceed with the project, and to understand the resulting implications upon the technology investment portfolio.

The Status Report, Post Project Review, and Value Measurement Review will allow the County to (1) monitor actual expenditures throughout a project's lifecycle, and (2) assess the return on investment based on actual realization of defined values and benefits established within the Project Proposal Form. The costs can be analyzed in a variety of ways by summarizing actual performance results by project, by project lifecycle stages, by cost categories across projects, by Program, and for the entire County.

By looking at the total cost of ownership for technology investments over their entire project life, it will be possible for the County to recognize that there are upfront costs associated with selecting and implementing an initiative, as well as in administering the technology over time. For instance, the initial software licenses for a system must be renewed each year through licensing and maintenance fees to keep the system upgraded and current. Similarly, if it is expected that the user count will increase over time as more employees benefit from the system, the additional license costs and increased maintenance fees need to be accounted for when defining the total costs of ownership. As another example, when an initiative involves customization it will be important for the County to account for not only the upfront costs associated with developing the customization, but also the recurring costs required to maintain the customization as new system upgrades are deployed.

To help facilitate the various total cost of ownership computations, the County will need to assess the capabilities of the accounting and budgeting systems. The result should be to tailor the existing systems to support the mechanics of data collection, and to use project performance records to supplement the process.

E. Specific Measures

Outcome measurements should be considered from various perspectives including while a technology initiative is in the process of being implemented, once the project has been completed, and later when the ability to achieve stated value propositions can be assessed. At the same time, projects should be measured collectively by Program and across the entire County. As a result, there are expected to be two categories of measurements: (1) project-specific measures and (2) the Program and Countywide summary measures. The remainder of this section defines both types of measurement categories and identifies general measurement criteria that may be used for each technology initiative. It is expected that the measurement criteria will be applied in more detail specific to the circumstances of each project.

1. Project Measures

Project measures should be classified according to their application throughout the technology lifecycle. Various stages of the technology lifecycle that are considered for each project include project implementation, project completion, and realization of project objectives.

Implementation. Status Reports should be used to document the progress of a project during implementation. In addition to indicating the *interim* status of the project budget, schedule, tasks, and scope, the Status Report is to be used to report on the following types of project measures:

- Business objectives achievement
- Scope management
- Tasks and milestone completion
- Project schedule management
- Impact management on organization and other entities
- Risk identification and mitigation
- Staff utilization
- Budget tracking

Completion. Once the project has been completed, the final step will be to document the results within the Post Project Review. The Post Project Review should represent the accumulation of all the status reports and communicates the final standing of the project budget, schedule, tasks and scope. At the same time, the Post Project Review should document the *final* results of the completed project based on the following project measures:

- Business objectives achievement
- Scope management
- Tasks and milestone completion
- Project schedule management
- Impact management on organization and other entities
- Risk identification and mitigation
- Staff utilization
- Budget tracking

Realization. Technology initiatives should be undertaken to achieve specific goals and outcomes. The purpose of the realization measures is to assess whether the outcomes were attained and whether they were achieved to the extent expected. Using the Value Measurement Review, the County can evaluate general initiative outcomes to determine whether the project accomplished results such as:

- Achieved full value of expected benefits
- Remained consistent with lifecycle cost estimates
- Achieved defined objectives
- Cost savings
- Cost avoidance
- Eliminated operating fees
- Reallocation of staff time
- Streamlined workflow
- Efficiency improvements
- Automated manual processes
- Improved inquiry/reporting
- Integrated systems
- Eliminated redundancies
- Met legislative mandates

2. Program and Countywide Measures

Each year the County should evaluate whether the performance of the Programs and the County in using and implementing technology was consistent with the vision, goals, objectives, and strategies of the Strategic Technology Plan, as well as standards established by the technology governance bodies. This evaluation should be accomplished by preparing Report Cards. The intent of the Program and Countywide measures is to reaffirm the Strategic Technology Plan and to avoid encouraging stovepipe behavior among the County agencies. Some of the key measures that are presented as part of the Report Card are:

- Consistency with technology vision and guiding principles
- Adherence to technology strategies
- Value recognition
- Continuous refinement and improvement
- Management of technology initiatives portfolio
- Project results
- On-time completion
- Staff utilization
- Staff performance
- Implementation budget management
- Production budget management

F. Project Measurement Tools

The measurement tools to be used to support individual technology initiatives are comprised of the Project Proposal Form, Status Reports, Post Project Review, and Value Measurement Review. These four tools allow for monitoring and management of an initiative throughout the project lifecycle. This section provides an overview of how the four project measurement tools interrelate and defines the core components of each tool. Each tool is presented with a brief description of its purpose, identification of the preparer and key users of the form, expectations for when the tool is used, and a summary of the tool. Examples of each measurement tool form are found in the Appendix.

1. Overview

The project measurement tools should interrelate to incrementally define outcome measurement expectations in the project planning and development phases, and then to monitor and analyze actual outcomes during the implementation and production phases. The various sections of the measurement tools should correspond to key measurements that are to be tracked and managed during the project lifecycle.

The Project Proposal Form is to be used to establish expected performance measures for each project. Consequently, this tool should be used during the project planning and project development phases of the project lifecycle. The remaining measurement tools can then be used to benchmark actual performance and outcomes against expectations. Presented below is an overview of the relevant measurements associated with the Project Proposal Form.

Tool:	Project Proposal Form
Lifecycle Phase:	Project Planning and Development
Section of Measurement Tool	**Relevant Measurement**
Business Case	Expected Value Propositions (and Qualitative Benefits)
Work Plan and Schedule	Expected Work Plan and Schedule
Staffing	Expected Staff Utilization
Cost/Benefit Analysis	Expected Costs and Quantitative Benefits
Risk Assessment	Expected Risk Factors and Mitigation Strategy
Performance Measures	Expected Outcomes

Status Reports are to be used to track project performance as the technology is being implemented. The actual interim performance of key measures can then be monitored to ensure that each project remains within scope, schedule, and budget. When appropriate, the project team can then take corrective action to resolve potential issues impacting the outcome of the project before they jeopardize the overall project. An overview of the Status Report tool is shown below.

Tool: Lifecycle Phase:	Status Report Implementation (In Process)
Section of Measurement Tool	**Relevant Measurement**
Status of Hours	Actual Scope Management and Staff Utilization (Interim)
Status of Dollars	Actual Implementation Costs (Interim)
Completed, Current and Upcoming Tasks	Work Plan and Schedule Management
Change in Risk Assessment	Actual Risk Management
Status of Measures	Actual Value Propositions and Outcomes (Interim)

In comparison to Status Reports, the Post Project Review should be used to assess final measurement outcomes once a project has been fully implemented. Such a review will allow the County to maintain a record of how well the project was conceived and executed. Variances can then be analyzed to refine future planning and estimates can be made to support continuous improvement in how technology is deployed. The Post Project Review should rate the overall results of the project against predefined project implementation evaluation criteria. A synopsis of the Project Review Form and the relevant measurements are presented below.

Tool: Lifecycle Phase:	Post Project Review Implementation (Upon Completion)
Section of Measurement Tool	**Relevant Measurement**
Schedule Summary	Actual Staff Utilization, Work Plan, and Schedule Management
Budget Summary	Actual Implementation Costs (Final)
Measurement Completion Summary	Actual Outcomes
Project Ratings	Project Score (Aggregate scores are used for Report Cards)

The final project measurement tool should be the Value Measurement Review. The tool is to be applied once the implemented technology has been in production for sufficient time to assess the extent that value propositions and outcomes were achieved. The review should be used to capture actual production costs in comparison to expectations, as well as to evaluate whether value propositions, quantitative benefits and outcomes were realized. Finally, the Value Measurement Review should score the project using predefined outcome measurement criteria. Presented below is an overview of the relevant measurements associated with the Value Measurement Review.

Tool: Lifecycle Phase:	Value Measurement Review Production
Section of Measurement Tool	**Relevant Measurement**
Production Cost Status	Actual Production Costs
Realization Summary	Actual Value Propositions, Quantitative Benefits, and Outcomes
Measurements Ratings	Measurement Score (Aggregate scores are used for Report Cards)

The Project Ratings (from the Post Project Review) and the Measurement Ratings (from the Value Measurement Review) are to be aggregated to establish the Program and Countywide Report Cards. The Report Cards will provide the ability to assess how effective individual Programs and the County are at deploying and utilizing technology. In addition, the Report Cards will establish the information necessary to track total cost of ownership for technology. A summary of the relevant measurements monitored as part of the Program and Countywide Report Cards is shown below.

Tool: Lifecycle Phase:	Program and Countywide Report Cards Production (Annually)
Section of Measurement Tool	**Relevant Measurement**
Project Portfolio Performance	Annual Performance Compared with Strategic Technology Plan
Project Ratings Performance	Average Project Ratings for All Projects
Measurement Ratings Performance	Average Measurement Ratings for All Projects

2. Project Proposal Form

A brief description of the purpose of the Project Proposal Form, identification of the preparer and key users of the tool, expectations for when the tool is used, and a summary of the Project Proposal Form are presented below. It is expected that the County will establish a simplified derivative of the Project Proposal Form for technology initiatives that are smaller, less complex, and have limited budget implications.

Objective: The Project Proposal Form will be used to establish the business case and funding request for technology projects. Projects that have sufficient complexity, risk, or budget implications will need to provide more details than smaller, less complex, less risky projects. After the project has been completed, the outcome measurements defined within the Project Proposal Form can be used to assess the overall success of the project and the extent to which outcomes and value propositions were realized.

Preparer: Program management representative who has identified the technology initiative and will sponsor the assembly of the project submittal. For larger, more complex projects, a project manager should be involved in the write-up.

Key Users: Review of proposed technology project initiatives is to be completed by the appropriate technology governance bodies in conjunction with the Budget Office.

Timing: Initial completion of the Project Proposal Form should be done during the Project Planning phase to obtain approval to proceed with further analysis and project development. Final and comprehensive completion of the Project Proposal Form should be accomplished during the Project Development phase to determine that a sufficient business case exists for approving the acquisition and implementation of the project.

Summary: Presented below is an overview of the major sections that should comprise the Project Proposal Form.

A. Project Summary
   - Project Description
   - Existing Condition and Anticipated Changes
   - Impact
   - Project Duration
   - Staff Requirements
   - Total Cost of Ownership
   - Key Measures

B. Business Case
C. Business Plan Alignment
D. Impact
E. Work Plan
F. Schedule
G. Staffing
H. Cost/Benefit Analysis
I. Budget Sources
J. Risk Assessment
K. Alternatives Analysis
L. Performance Measures

3. Status Report

A brief description of the purpose of the Status Report, identification of the preparer and key users of the tool, expectations for when the tool is used, and a summary of the Status Report are presented below.

Objective: The Status Report will be used by the implementation team to monitor that a technology project remains in scope, milestones and tasks are being completed, and the project remains within budget, as well as to efficiently manage staff utilization and to mitigate risk.

Preparer: Project Manager responsible for the implementation of the technology initiative.

Key Users: Independent monitoring of the project's scope, schedule and budget will be done by the Office of Information Resource Management-Project Management Office in conjunction with the Project Review Board.

Timing: Status Reports are to be prepared monthly by the Project Manager and provided to the Office of Information Resource Management-Project Management Office based on a defined monthly schedule.

Summary: Presented below is an overview of the major sections that should comprise a Status Report.

A. Project Status Narrative
B. Status of Hours and Dollars
C. Completed Tasks
D. Current Tasks
E. Upcoming Tasks
F. Change in Risk Assessment
G. Status of Measures

4. Post Project Review

A brief description of the purpose of the Post Project Review, identification of the preparer and key users of the tool, expectations for when the tool is used, and a summary of the Post Project Review are presented below.

Objective: The Post Project Review will be used as a final assessment for each completed technology project. The review will consider whether project objectives were achieved, scope was managed, milestones and tasks were completed on time and without issues, work was completed within budget, affiliated organizations and entities were not unexpectedly or unnecessarily impacted, risks were managed and/or mitigated, and staff were effectively utilized. Any variances are to be accounted for and the associated impacts analyzed, and insights that can be used for similar future projects are to be documented.

Preparer: Project Manager responsible for the implementation of the technology initiative, with independent assistance of a representative from the Office of Information Resource Management-Project Management Office.

Key Users: Independent monitoring of the results from completed project implementations should be conducted by the Office of Information Resource Management-Project Management Office in conjunction with the Project Review Board.

In addition, the Program that originally sponsored and is ultimately responsible for the project should use the feedback from the Post Project Review to monitor the Program's ability to manage and deploy technology over time to meet the goals of the Program. The Post Project Reviews for the Program are to be aggregated to support the Program's annual Report Card.

Timing: The Post Project Review should be prepared once the project implementation has been completed to summarize the final status and results of the project.

Summary: Presented below is an overview of the major sections that should comprise the Post Project Review.

A. Project Objectives Accomplished
B. Project Objectives Not Accomplished
C. Schedule and Budget Summary
D. Explanation of Variances
E. Measurement Completion Summary
F. Project Ratings
G. Lessons Learned

5. Value Measurement Review

A brief description of the purpose of the Value Measurement Review, identification of the preparer and key users of the tool, expectations for when the tool is used, and a summary of the Value Measurement Review are presented below.

Objective: The Value Measurement Review will be used to analyze whether the outcome measures and value propositions promoted as part of the business case contained in the Project Proposal Form were actually achieved. The review should focus on management of ongoing production costs, realization of expected outcomes and value propositions, an explanation of variances, and insights that can be used for similar future projects.

Preparer: The Office of Information Resource Management-Project Management Office in conjunction with representatives from the sponsoring Program of the project initiative.

Key Users: Independent monitoring of the ability to achieve planned outcomes and value propositions for completed project implementations should be conducted by the Office of Information Resource Management-Project Management Office in conjunction with the Project Review Board.

In addition, the Program that originally sponsored and is ultimately responsible for the project should use the feedback from the Value Measurement Review to monitor the Program's ability to manage and deploy technology over time to meet the goals of the Program. The Value Measurement Reviews for the Program are to be aggregated to support the Program's annual Report Card.

Timing: The Value Measurement Review should be prepared once sufficient time has elapsed after implementation completion to allow measurement of the extent to which outcomes and value propositions were realized. For smaller projects this may be a period of as little as three to six months. For larger and more complex projects, when the period could be multiple years in duration, the Value Measurement Review can be prepared incrementally over time to assess the impact of the complete initiative over time.

Summary: Presented below is an overview of the major sections that should comprise the Value Measurement Review.

A. Production Cost Status
B. Realization Measurements Summary
C. Explanation of Variances
D. Measurements Ratings

G. Program and Countywide Measurement Tools

The performance of each Program in implementing and managing technology is monitored each year. Program performance is determined by assessing the outcome of each project for which the Program has been responsible. Such accountability allows the County to ensure that the capabilities of each Program's management to deploy technology can be improved and refined over time based on lessons learned in the past.

Similarly, the performance of the County can be determined by combining the results of all projects. Such an aggregate perspective enables a Countywide snapshot of how effective technology has been deployed. By examining the Countywide measurements, King County has the ability to monitor and manage the entire County technology portfolio in an effective and efficient manner.

The Report Card is presented with a brief description of its purpose, identification of the preparer and key users of the form, expectations for when the tool is used, and a summary of the tool. An example of the Report Card measurement tool is found in the Appendix.

Program and Countywide Report Cards

A brief description of the purpose of the Program and Countywide Report Cards, identification of the preparer and key users of the tool, expectations for when the tool is used, and a summary of the Program and Countywide Report Cards are presented below.

Objective: The Program and Countywide Report Cards will be used to assess how effective each Program and the entire County are at implementing and utilizing technology to meet business goals and objectives. The established Project and Measurement Ratings should be based on predefined criteria to enable a uniform method of scoring. The scores are to be used as a basis for comparing technology deployment and management throughout the County in annual intervals.

Preparer: Office of Information Resource Management-Project Management Office in conjunction with representatives from the Program that sponsored the project initiative. The Office of Information Resource Management-Project Management Office should assemble the Countywide Report Card.

Key Users: Independent monitoring of Project Ratings and Measurement Ratings for completed project implementations should be conducted by the Office of Information Resource Management-Project Management Office in conjunction with the Project Review Board.

Timing: The Program and Countywide Report Cards should be completed annually. The Report Cards are to be compared from year to year in order to determine changes in technology management and utilization over time.

Summary: Presented below is an overview of the major sections that should comprise Program and Countywide Report Cards.

A. Project Portfolio Performance
B. Project Ratings Performance
C. Measurement Ratings Performance

H. Form Samples

Examples of the measurement tool forms described throughout the Performance Measurement document are presented as part of this section.

- Project Proposal Form
- Status Report
- Post Project Review
- Value Measurement Review
- Report Card (used for each Program and Countywide)

King County
Technology Initiative
Project Proposal Form

Project Name:					
Agency:					
Sponsor:					
Submitted by:		**Phone:**		**E-mail:**	
New or Existing Project:					
Duration (months/years):					
Budget:					
Budget System Ref. #:					

PROJECT SUMMARY

Project Description:
Provide a brief description of the project, including the purpose and reason for the project. In addition, describe the existing situation and the anticipated changes that will occur as a result of this project.

Existing Situation and Anticipated Changes:

Impact:
Identify the entities that will be affected by the project and estimate the impact (low, moderate, high) on each.

Internal - *Other Departments, County Agencies*		**External -** *Other Entities, Public*	
Entity	**Impact Level**	**Entity**	**Impact Level**

Project Duration:
Estimate the beginning and ending dates and the estimated hours required for completion of each task.

Phase	**Begin Date**	**End Date**	**Estimated Hours**

Staff Requirements:
List the staff required for the project and the estimated Full Time Equivalent for each staff.

Phase	**FTEs**	**Staff Requirements (Titles)**

Total Cost of Ownership:
Estimate the budget for each of the major phases rolled up from the Cost/Benefit Analysis.

Project Planning	**Project Development**	**Implementation**	**Production** (Over 10 Years)	**Total**

Key Measures:
List the anticipated measures that will be utilized to gauge success of the project for each of the stages of the Lifecycle.

Implementation	**Completion**	**Realization**

Business Case:
Provide arguments for why the project should be conducted, including qualitative and quantitative benefits. Describe the value proposition of the project.

Business Plan Alignment:
Describe how this project links to the Department Plan and how it relates to objectives of the overall County strategic technology plan.

Impacts:
Identify the entities (internal and external) that will be affected by the project, provide comments on the impact, and estimate the level of impact (low, moderate, high) on each entity.

Internal (*Other Departments, County Agencies)*

Entity	Impact Description	Impact Level

External (*Other Entities, Public)*

Entity	Impact Description	Impact Level

Work Plan:
Identify and describe the phase and the tasks within the phases that will comprise the project, and who will be responsible for each phase/task.

#	Phase/Task	Responsibility	Description

Schedule:
Estimate the beginning and ending dates and the estimated hours required for completion of each task.

#	Phase/Task	Begin Date	End Date	Estimated Hours

Staffing:
List the staff required for the project and the estimated full time equivalent for each staff.

#	Phase/Task	FTEs	Staff Requirements (Titles)

Cost/Benefit Analysis:
Estimate the monetary costs and benefits for each of the items listed below that are relevant to the project.

Costs	Years 1	2	3	4	5	6	7	8	9	10
I. Capital Costs										
A. Project Planning										
B. Project Development										
C. Implementation										
1. Hardware										
Servers										
Workstations										
Network										
Telecommunications										
2. Software										
Application										
Database										
Development Tools										
Reporting Tools										
3. Staffing										
Professional Contract Assistance										
Temporary Assistance										
ITS Support										
Agency Staff										
4. Support										
5. Project Expenses										
6. Other										
7. Contingency										
Subtotal Capital Costs										
II. Production (Operating Costs)										
A. Facilities										
B. Maintenance										
C. Licenses										
D. Upgrades										
E. Interest										
F. Staffing										
G. Training										
H. Hardware										
I. Other										
Subtotal Operating Costs										
Grand Total Costs										

Benefits	Years 1	2	3	4	5	6	7	8	9	10
I. Quantitative Benefits										
A. Eliminate Maintenance Fees										
B. Time Reallocation										
C. Streamline Workflow										
D. Efficiency Improvements										
E. Process Automation										
F. Automated Time Entry										
G. Improved Inquiries and Reporting										
H. Automated Reporting										
I. System Integration										
J. Eliminate Subsystems										
K. Eliminate Redundancies										
L. Other										
Total Benefits										

Net Cumulative Costs and Benefits	Break Even (in Years) Discounted	Non-Discounted	Net Present Value	IRR Percentage

Budget Sources:
Identify the budget sources for the funds, the expected dollar amount from each source, and the specific expenditures to which the funds will be applied by phase/task.

Budget Account	Dollar Amount	Expected Expenditures by Phase/Task

Risk Assessment:
Identify the potential risk factors associated with the project, the risk level for each factor (high, moderate or low) and the anticipated actions/steps to mitigate the risk.

Risk Factor	Risk Level	Mitigation (if Moderate or High risk)

Performance Measures:
Identify the measures that will be utilized to gauge success of the project as well as the expected outcomes for those measures.

Implementation **(e.g., Measure- project schedule management, Outcome- tasks completed on schedule)**

Measures	Outcome

Completion **(e.g., Measure- budget tracking, Outcome- project completed within budget)**

Measures	Outcome

Realization **(e.g., Measure- minimize manual processing, Outcome- staff time to perform function reduced by 10 hrs/week)**

Measures	Outcome

Alternatives Analysis:
For projects greater than $250,000, identify alternative projects/measures, analyze each, and compare them to the proposed project with respect to the strengths, weaknesses, timeframes, resources, costs and risk.

	Proposed Project	Alternative 1	Alternative 2
Strengths			
Weaknesses			
Timeframes			
Resources			
Costs			
Risk			

Attach any supplemental materials used to prepare and support the contents of the Project Proposal Form. Please provide electronic and printed copies to the Office of Information Resource Management.

King County
Technology Initiative
Status Report

Project Name:	
Agency:	
Report Date:	

Project Status Narrative:
Provide a narrative describing progress-to-date. Identify any unscheduled tasks required, hurdles to overcome, etc.

Status:
Compare the actual hours and dollars spent for each task to the budgeted hours and dollars.

Hours

Phase/Task	Budget	Actual to Date	Variance

Dollars

Phase/Task	Budget	Actual to Date	Variance

Completed Tasks:
Identify the tasks completed from the Work Plan since the last status report.

Phase/Task	Comments

Current Tasks:
Identify the tasks currently underway as of this status report, and estimate the percentage complete for each task.

Phase/Task	Comments	Percent Complete

Upcoming Tasks:
Identify the tasks that are pending initiation or are on hold and determine the status of each.

Phase/Task	Comments

Change in Risk Assessment:
Describe any changes in risks (either increase or decrease) and identify mitigating actions for each.

Risk Factor	Change	Action/Mitigation

Status of Measures:
For the Measures identified in the Project Proposal Form, discuss the status of each.

Measure	Comments	Status (Completed, Pending)

King County
Technology Initiative
Post Project Review Form

Project Name:	
Agency:	
Sponsor:	
Review Date:	
Project Completion Date:	

Project Objectives Accomplished:
Identify and describe the objectives stated during Project Planning and Development that were accomplished during Project Implementation.

Objective	Comment

Project Objectives Not Accomplished:
Identify any objectives that were not accomplished during Project Implementation, and comment on why they were not.

Objective	Comment

Schedule and Budget Summary:
Compare the actual hours and dollars spent for each task to the budgeted hours and dollars.

Hours			
Phase	**Budget**	**Actual to Date**	**Variance**

Dollars			
Phase	**Budget**	**Actual to Date**	**Variance**

Explanation of Variances:
For each phase or task that did not occur as planned, describe the variation in the project as well as the extent of impact and what the implications of the variance are.

Expected Outcome	Variance	Impact and Implications

Measurement Completion Summary:
For the outcomes identified in the Project Proposal Form, discuss the outcome of each.

Measure	Outcome Description	Met/Unmet

Project Ratings:
For each of the standard measures identified below, rate how well the project team met each (1 – lowest, 5 – highest), and provide comments on each measure.

Measures	Rating	Comments
Business objectives achievement		
Scope management		
Tasks and milestone completion		
Project schedule management		
Impact management		
Risk identification and mitigation		
Staff utilization		
Budget tracking		

Lessons Learned: *Within each of the project areas listed below, describe any lessons learned.*	
Project Area	**Lessons Learned**
Project Planning	1.
	2.
Budget Management	1.
	2.
Scope Management	1.
	2.
Schedule Management	1.
	2.
Issues Management	1.
	2.
Risk Management	1.
	2.
Change Management	1.
	2.
Quality Management	1.
	2.
Communications	1.
	2.
Team Management	1.
	2.
Project Close-Out	1.
	2.
Requirements	1.
	2.
Design	1.
	2.
Development	1.
	2.
Implementation	1.
	2.
Support	1.
	2.
Work Effort Estimating	1.
	2.
Transition to Production	1.
	2.
Testing	1.
	2.
Other	1.
	2.

King County
Technology Initiative
Value Measurement Review Form

Project Name:	
Agency:	
Sponsor:	
Review Date:	
Project Dates:	
Project Cost:	

Production Cost Status:
Compare the dollars spent during the Production phase to the budgeted dollars, and describe the reasons for any variances.

Production Costs	Budget	Actual	Variance	Reason for Variance

Realization Measurements Summary:
For each of the value propositions, benefits, and outcomes identified in the Project Proposal Form, compare the expected outcome with the actual outcome and comment on the reasons for any variances.

Quantitative	
Measure:	
Expected Outcome:	
Actual Outcome:	
Reason for Variance:	
Measure:	
Expected Outcome:	
Actual Outcome:	
Reason for Variance:	
Measure:	
Expected Outcome:	
Actual Outcome:	
Reason for Variance:	

Qualitative	
Measure:	
Expected Outcome:	
Actual Outcome:	
Reason for Variance:	
Measure:	
Expected Outcome:	
Actual Outcome:	
Reason for Variance:	
Measure:	
Expected Outcome:	
Actual Outcome:	
Reason for Variance:	

Explanation of Variances:
For each phase or task that did not occur as planned, describe the variation in the project as well as the extent of impact and what the implications of the variance are.

Expected Outcome	Variance	Impact and Implications

Measurement Ratings:
For each of the standard measures listed below, rate how well the project team met each (1 – lowest, 5 – highest) and provide comments on each measure.

Measures	Rating	Comments
Consistency with technology vision		
Adherence to technology strategies		
Value recognition		
Continuous refinement/improvement		
Technology initiatives portfolio management		
Project results		
On-time completion		
Staff utilization		
Staff performance		
Implementation budget management		
Production budget management		

King County
Technology Initiative
Report Card

Agency Name:	
Report Date:	

Project Performance Portfolio:
List the projects that are comprised within the Program's technology project portfolio, and provide schedule, budget and implementation status information for each. This includes projects that were in process at the beginning of the year, commenced during the current year, or are planned to beginning in the next year.

Projects in Process:
Identify and indicate the Program's implementation performance related to projects that were in process at the beginning of the year.

Project Name	Planned End Date	Actual/Projected End Date	Project Budget	Project To Date Actual	Percentage Complete
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					

New Projects:
Identify and indicate the Program's implementation performance related to projects that commenced during the current year.

Project Name	Planned End Date	Actual/Projected End Date	Project Budget	Project To Date Actual	Percentage Complete
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					
Comments:					

Future Projects
Identify and indicate the Program's planning performance related to projects that are planned to beginning in the next year.

Project Name	Planned Start Date	Actual Expected Start Date	Project Budget	Actual/Expected Budget
Comments:				
Comments:				
Comments:				
Comments:				
Comments:				
Comments:				
Comments:				
Comments:				
Comments:				
Comments:				
Comments:				

Project Ratings Performance:
For each of the project completion measures listed below, average the ratings for the portfolio of projects as rated on the Post Project Review Form, and provide a summary of major issues and observations based on the ratings.

Measure	Average Rating	Comments
Business objectives achievement		
Scope management		
Tasks and milestone completion		
Project schedule management		
Impact management		
Risk identification and mitigation		
Staff utilization		
Budget tracking		

Summary Assessment

Measurement Ratings Performance:
For each of the value realization measures listed below, average the ratings for the portfolio of projects as rated on the Value Measurement Form, and provide a summary of major issues and observations based on the ratings.

Measure	Average Rating	Comments
Consistency with technology vision		
Adherence to technology strategies		
Value recognition		
Continuous refinement/improvement		
Technology initiatives portfolio management		
Project results		
On-time completion		
Staff utilization		
Staff performance		
Budget management		

Summary Assessment